

## **REMARKS**

### ***Claim Amendments***

Claim 1 has been canceled in favor of a new independent claim 34. The remaining claims have been amended, where necessary, to depend from new claim 34 and to refer to the claimed “apparatus” instead of “improvement”. Entry and consideration of the amendments is kindly requested.

### ***Claim Rejections - 35 USC § 112***

The rejection of Claims 1-33 under 35 USC 112, second paragraph, is respectfully considered overcome for reasons discussed below.

Claim 1 has been cancelled and a new independent claim 34 is added. Claim 34 refers to a “permanently **defined** function” rather than a “permanently **definable** function” as set forth in canceled claim 1. The meaning of this is clear from ordinary language, and examples of permanently defined functions of the modular treatment station are found in the specification. These include heating, fluid mixing, air circulation, air/vapor extraction, and program control. Accordingly, claim 34 meets with the requirements of 35 USC § 112.

Regarding claim 2, the Office Action takes issue with “combined connection and connection regions...”, however this language is not in claim 2. Rather, claim 2 refers to “combined **reception** and connection regions” to be consistent with terminology used in the specification. The “combined reception and connection regions” correspond to regions 13 shown at Figs. 3 and 4 and described at paragraph [0022]. These are regions that receive a modular treatment station and have hardware for connection of the modular treatment station (i.e. power connection, fluid line connection). So, claim 2 is considered definite as required by 35 USC § 112.

Claims 3 and 5 have been canceled, and therefore the rejection of these claims under 35 USC 112 is now moot.

Claim 6 is amended to refer to “a bar for guiding reception and insertion of said modular treatment station...”. Please see bar 14 shown in Figs. 3 and 4. In view of this, claim 6 is now thought to be clear.

The term “plug-like,” found to be vague and indefinite, has been deleted from claim 7.

In view of the foregoing, it is asked that the rejection of claims 1-33 under 35 USC 112 be withdrawn.

***Claim Rejections - 35 USC § 102***

Claims 1-6, 11-13, 15-19, and 21-33 are rejected as being anticipated by US 5,895,628 (Heid et al.). Claims 1, 3, and 5 are cancelled. New independent claim 34 is considered patentable over Heid et al. for reasons explained below.

Stations 6a-6j of Heid et al. have been read on the claimed "modular treatment station." Stations 6a-6j appear to be simply containers for fluids such as liquid reagents and water. See column 4, lines 7-14. Stations 6a-6j do not have "at least one permanently defined function, other than containment of fluid" as now required by claim 34. Moreover, it is not clear from the description that stations 6a-6j are removable from housing 1a, 1b as required by claim 34. The modular treatment station of the present invention performs a permanently defined function other than containing fluid, such as heating, mixing, circulating air, extracting air/vapor, and program control. The modular treatment station is removable to permit another modular treatment station having a different defined function to be inserted and docked, thereby providing greater functional flexibility to the apparatus. Heid et al. does not contemplate the claimed apparatus, and has no description of a removable station having the functions set forth in claims 18, 19, 21 and 22. Thus, applicants respectfully seek favorable treatment of new claim 34 and all claims depending therefrom.

Claims 1-6, 11-13, 17, 19, and 21-33 are rejected as being anticipated by US 6,635,225 (Thiem et al. '225). Claims 1, 3, and 5 are cancelled. New independent claim 34, and claims depending therefrom, are respectfully considered patentable over Thiem et al. '225 for reasons set forth below.

The apparatus of Thiem et al. '225 includes two side-by-side rows of processing stations (reagent containers 3 and removal station 8). These stations do not have "at least one permanently defined function, other than containment of fluid". It is suggested to configure the removal station 8 as a separate and retrofittable module (see column 3, lines 47-48), however it is simply a container for fluid having no permanently defined function other than containment of fluid, thus making it easy to arrange as a modular station. In the present invention of claim 34, the modular treatment station has a permanently defined function other than fluid containment that makes connection as a modular station relatively more involved (i.e. power, flow connections are needed for some functions). There is no suggestion in Thiem et al. '225 of a modular treatment station, removable from the housing, as defined by claims 19, 21 and 22. Consequently, it is asked that the rejection based on Thiem et al. '225 be withdrawn.

Claims 1-13, 15-17, 19, and 21-33 are rejected as being anticipated by US 6,080,365 (Thiem et al. '365). Claims 1, 3, and 5 are cancelled. New independent claim 34, and claims depending therefrom, are respectfully considered patentable over Thiem et al. '365 for reasons presented below.

The apparatus of Thiem et al. '365 is in the form of a circular array of processing stations (chemical containers 4 and paraffin containers 5). There is no teaching or suggestion that containers 4, 5 have a permanently defined function other than fluid containment. None of

the stations 4, 5 has its own rinsing device, fan, or vapor extraction system for performing a function other than fluid containment. Therefore, it is respectfully submitted that claim 34, and all claims depending therefrom, are patentable over Thiem et al. '365.

In view of the foregoing, the Patent Office is asked to remove the rejections stated under 35 USC § 102.

***Claim Rejections - 35 USC § 103***

Claims 7-10, 14, and 20 are rejected under 35 USC 103(a) as being unpatentable over Heid et al. or Thiem et al. '225. The rejection is respectfully overcome in view of new parent claim 34. As noted above, the devices of Heid et al. and Thiem et al. '225 do not teach or suggest a modular treatment station having a permanently defined function other than fluid containment. This is a limitation of claims 7-10, 14, and 20 inherited from claim 34.

There is no motivation in Heid et al. or Thiem et al. '225 to provide electrical contacts because the treatment stations are mere containers. It is applicants' own teaching to provide an electrical device such as a fan incorporated into a modular (removable) treatment station, thereby necessitating electrical power connection to the inserted module. A similar argument applies for a thermally conductive connection and a flow connection created between the modular treatment station and the apparatus when the modular treatment station is docked. In order to assert that these features would be obvious additions to Heid et al. or Thiem et al. '225 at the time the invention was made, one must rely on impermissible hindsight of the invention as broadly defined by claim 34.

Regarding claim 14, the cover being claimed is for an access opening provided in the housing for insertion and removal of said modular treatment station. Please see cover 19 shown in Fig. 2, which covers access opening 18 (Fig. 3). The claimed cover is unrelated to covering a treatment station container.

Concerning claim 20, adding a turbulence-inducing device to Heid et al. or Thiem et al. '225 may have been desirable at the time the invention was made, however mere addition of such a device to Heid et al. or Thiem et al. '225 does not yield the present invention because the turbulence-inducing device would be associated with the overall apparatus, and not part of a removable modular treatment station.

Therefore, withdrawal of the rejection of claims 7-10, 14 and 20 is respectfully sought.

Claims 14 and 20 are rejected under 35 USC 103(a) as being unpatentable over Thiem et al. '365. Claims 14 and 20 are patentable for the same reasons parent claim 34 is patentable. Moreover, it is pointed out that modifying Thiem et al. '365 to provide a turbulence-inducing device does not yield the present invention because the turbulence-inducing device would be associated with the overall apparatus, and not part of a removable modular treatment station. Favorable reconsideration of claims 14 and 20 is respectfully requested.

***Double Patenting***

Claims 1-33 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over:

- 1) Claims 1-43 of 09/932,900 filed August 20, 2001
- 2) Claims 1-32 of 09/793,199 filed Feb. 26, 2001;
- 3) Claims 1-26 of 10/011,674 filed October 22, 2001; and
- 4) Claims 1-28 of 09/932,889 filed August 20, 2001.

Item (1) is pending, and an amendment was mailed on August 16, 2004 amending the claims. Currently, claims 1, 3-20, and 22-43 are pending. Of these, claims 1, 20, and 41 are independent and read as follows:

1. (currently amended) In an apparatus for treating cytological or histological specimens, said apparatus having multiple processing stations and a transport device for delivering said specimens into and out of said processing stations, a loading station for loading with specimens or object carriers carrying said specimens, and a removal station for removing said treated specimens or said object carriers carrying said treated specimens, the improvement comprising:  
a plurality of processing stations allocated to said loading station, wherein the number of processing stations in said plurality of allocated processing stations is selected by a user and can be varied.
20. (currently amended) In an apparatus for treating cytological or histological specimens, said apparatus having multiple processing stations and a transport device for delivering said specimens into and out of said processing stations, a loading station for loading with specimens or object carriers carrying said specimens, and a removal station for removing said treated specimens or said object carriers carrying said treated specimens, the improvement comprising:  
a plurality of processing stations allocated to said removal station, wherein the number of processing stations in said plurality of processing stations is selected by a user and can be varied.
41. (currently amended) In a system having a plurality of sequentially arranged apparatuses for treating cytological or histological specimens, each said apparatus having multiple processing stations and a transport device for delivering said specimens into and out of said processing stations, a loading station for loading with specimens to be treated or object carriers carrying said specimens to be treated, and a removal station for removing said treated specimens or said object carriers carrying said treated specimens, the improvement comprising:  
said transfer device being operable to transfer said object carriers from an upstream apparatus to the apparatus with which said transport device is associated.

The improvement defined in claim 1 involves allocation of a plurality of processing stations to a loading station wherein the number of allocated stations is user-selectable. Claim 20 is similar to claim 1, but involves a removal station as opposed to a loading station. Claim 41 concerns operability of a transport device to transfer object carriers in from an upstream apparatus. By contrast, the present invention as defined by independent claim 34 relates to a modular treatment station that is removable from the apparatus housing and has a permanently defined function other than containment of fluid. The various claimed inventions relate to the same general type of apparatus, but are directed to specific features that are unrelated, patentably distinct inventions. No double-patenting issues have been raised in 09/932,900 with respect to the present application 09/933,415.

Item (2) is pending, and an amendment was mailed on July 27, 2004 amending the claims. Currently, claims 11-12, 17-18, 28-29, and new claims 33-35, are pending. Of these, claim 33 is the only independent claim and reads as follows:

33. An apparatus for staining histological and/or cytological specimens each mounted on a specimen slide, the apparatus comprising:
- a plurality of processing stations arranged in sequence, each of the plurality of processing stations having an excitation coil associated therewith for generating an excitation field;
  - a rack for carrying at least one specimen slide;
  - a **transponder** mounted on the rack for travel with the rack, the transponder having a code associated therewith;
  - a transport system for automatically transporting the rack and transponder to and from individual processing stations in the plurality of processing stations; and
  - a **control unit** connected to each of the excitation coils and to the transport system, the control unit executing a processing program to provide commands to the transport system to move the rack and the at least one specimen slide to and from specified processing stations;
- the transponder being activated by the excitation field at a processing station to transmit the code to the control unit, wherein the code is evaluated by the control unit to assign the processing program.

The apparatus of claim 33 above comprises a transponder and control unit not found in the present claims, and it does not include a modular treatment station as claimed herein.

Item (3) includes pending claims 1-25 (claims 15-26 were renumbered as 14-25 due to a numbering error), of which claims 1 and 16-18 are independent. These claims read as follows:

1. In an apparatus for treating objects, in particular for cytological or histological specimens, having multiple processing stations (2) and a transport device (4) for delivering said objects into and out of said processing stations (2), each of said multiple processing stations (2) comprising a container (3) for receiving liquid reagents, and for

immersion of said objects or of a rack (7) carrying a plurality of said objects, the improvement comprising:

**an insert (8)** that fits into said container (3), said insert (8) reducing the maximum capacity of said container (3); and

said rack (7) being sized for receipt by said reduced maximum capacity of said container (3).

16. An apparatus for reducing the volume of a reagent container (3) for treatment of specimens comprising:

**an insert (8)** that fits into said container (3), said insert (8) cooperating with said container (3) to reduce the maximum capacity of said container (3), and said insert (8) defining an opening for receiving a rack (7) by immersion.

17. A method for reducing the volume of a reagent container (3) for treatment of specimens comprising the steps of:

(a) **placing an insert (8)** into said containers (3), said insert (8) cooperating with said container (3) to reduce maximum volume of said container (3); and

(b) immersing a plurality of said specimens into said reduced volume of said container (3).

18. An apparatus for reducing the volume of a reagent container (3) for treatment of specimens comprising:

**an insert (8)** that reduces the maximum capacity of said container (3) without preventing a rack (7) from being immersed into said reagent.

The apparatus of claims 1 and 16, and the method of claims 17 and 18, are characterized by an insert not found in the claims of the present application. Application 10/011,674 is being examined by Examiner Jyoti Nagpaul, who did not raise double-patenting with the present application in the first Office Action mailed June 17, 2004.

Item (4) presently includes pending claims 29-32 following an amendment mailed August 26, 2004, of which claim 29 is the sole independent claim. It reads as follows:

29. (new) An apparatus for treating cytological or histological specimens comprising:

a plurality of processing stations;

an object holder for carrying at least one specimen;

a transport device for delivering the object holder into and out of the processing stations, wherein the transport device includes:

a robot arm having a free end movable in three-dimensions;

**a gripper** mounted at the free end of the robot arm for releasably grasping the object holder;

wherein the gripper is actuable to grasp the object holder by lowering the free end of the robot arm to cause the gripper to engage the object holder while the object holder resides in one of the processing stations; and

wherein the gripper is actuatable to release the object holder by lowering the free end of the robot arm beyond a position at which the object holder resides in and is supported by one of the processing stations.

Thus, claim 29 above is directed to a specific construction of a transport device, and includes limitations relating to a gripper mechanism of the transport device. The improvement of the present invention relates to a modular treatment station, not to a gripper mechanism. Application 09/932,889 is being examined by Examiner Yelena Gakh, who did not raise double-patenting with the present application in the first Office Action mailed February 27, 2004.

What appears to be the case here is that a single apparatus embodies several patentably distinct inventions. Therefore, while there is some overlap in description among the various applications, the claims of the applications are directed to patentably distinct inventions as discussed above.

In view of the foregoing, removal of the provisional double-patenting rejection is respectfully sought.

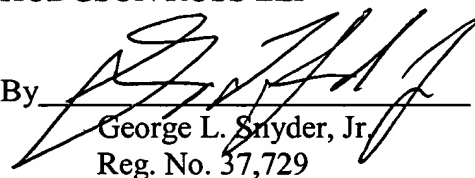
#### *Conclusion*

The present application is respectfully considered to be in a condition for allowance, and favorable reconsideration is kindly sought. If the Examiner has any questions, the undersigned attorney may be contacted at the number provided below.

Respectfully submitted,

HODGSON RUSS LLP

By

  
George L. Snyder, Jr.  
Reg. No. 37,729

GLS/

Enclosures: Petition for 3-Month Extension of Time  
Fee Transmittal  
Fee Check for \$950.00

One M&T Plaza, Suite 2000  
Buffalo, New York 14203-2391  
(716) 856-4000  
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